REMARKS

Initially, in the Office Action dated December 27, 2004, the Examiner has rejected claims 1, 9 and 10 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,935,207 (Logue et al.) in view of U.S. Patent No. 6,643,778 (Nakazawa). Claims 2-4, 7 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Logue et al. in view of Nakazawa and further in view of U.S. Patent No. 6,535,509 (Amicangioli). Claims 5, 6 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Logue et al. in view of Proxy-Sharing Proxy Servers (Clinton et al.).

By the present response, Applicants have amended claims 1, 9 and 10 to further clarify the invention. Claims 1-11 remain pending in the present application.

35 U.S.C. §103 Rejections

Claims 1, 9 and 10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Logue et al. in view of Nakazawa. Applicants respectfully traverse these rejections.

Logue et al. discloses providing mirrored site administrators with the number of hits from a proxy's document cache and for dispatching document requests in a proxy to more efficiently allocate the document cache space within the proxy. A proxy includes a document cache storing recently requested documents. The proxy is coupled to a client and to a remote server. The proxy maintains information regarding requests from the client that are serviced from the proxy's document cache such as the URL of the requested document and the number of cached responses.

This information is provided by the proxy to a remote site administrator. In this manner, remote site administrators can more accurately track total hits.

Nakazawa discloses that when a remote access terminal connected to a first Intranet receives provision of services from a second Intranet, a web server of the first Intranet loads a remote service execution environment to the remote access terminal. The second Intranet dynamically installs a service proxy on the second dynamic proxy server. The second Intranet supplies a remote service interface to the remote access terminal via a first dynamic proxy server and second dynamic proxy server. The service proxy receives provision of services from the second Intranet instead of the remote service interface. The network dynamically installs service proxies on a dynamic proxy server when multiple Intranets are connected, and therefore, firewall tunneling by the service unit is possible.

Regarding claim 1, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of this claim of, inter alia, a communication proxy apparatus that includes an individual action storage means for holding individual action definition information indicating a relationship between the information data and action information that indicates an action to be executed for the specific information data processed by the communication proxy apparatus as an agent, and that indicates execution conditions of the action, or an individual action execution means for executing an individual action for the information data, which is the data obtained from the server device, based on the individual action definition information,

13

under instructed conditions. The Examiner has failed to provide any portion of any reference that discloses or suggests an individual action storage means for holding individual action definition information as recited in the claims of the present application. Moreover, the Examiner has failed to identify any portion of any reference that discloses or suggests action information <u>that indicates an action to be executed for the specific information data and that indicates execution condition of the action</u>.

The Examiner asserts that Logue et al. discloses an individual action execution means for executing an individual action for the information data, which is instructed by the individual action definition information under instructed conditions at cols. 30-35 and Fig. 4 [410 and 466]. Since there are no cols. 30-35, Applicants assume the Examiner refers to col. 5, lines 30-35. However, these portions of Logue et al. merely disclose that the proxy server includes a proxy request processor 410, a document cache, a document database, and a transcoder 466. The proxy request processor receives requests from the WebTV client and sends responses to the WebTV client. However, this is not an individual action execution means for executing an individual action for the information data, which is the data obtained from the server device, based on the individual action definition information, under instructed conditions, as recited in the claims of the present application. These portions of Logue et al. merely disclose the contents of the proxy server 405 and that it receives requests and transmits responses from the WebTV to a client. Logue et al. merely discloses a conventional communication proxy apparatus.

14

Logue et al. does not disclose or suggest anything related to <u>executing an individual</u> <u>action for the information data obtained from the server device, based on an</u> <u>individual action definition</u>, as recited in the claims of the present application. Logue et al. merely relates to maintaining information regarding requests from a client that are serviced from the proxy's document cache and providing this information to a remote site administrator.

The Examiner admits that Logue et al. does not disclose or suggest issuing an access request to still another communication proxy apparatus or an individual storage means for holding individual action definition information indicating a relationship between the information data and action information that indicates an action to be executed for the specific information data processed by the communication proxy apparatus as an agent, and that indicates execution conditions of the action, but asserts that Nakazawa discloses these limitations in Fig. 3 [330, 340], col. 7, lines 17-30, col. 6, lines 57-62, and col. 5, lines 4-45. However, these portions of Nakazawa merely disclose that when matching is successful and the search reception receives a service search request, the server issues a search request for service based on the service identifier stored in the service search request to the object directory server, details on whether to permit use of this service or not based on connection permission certification, that when matching fails and search reception denies the reception of the service search request, the server deletes the server search request and the remote service interface request from the server after a specified time has elapsed, and that the service search request

15

performs a search request to the object directory servers and based on requests

received by the search receiver, and the service proxy is dynamically installed within

the dynamic proxy server that is the service proxy explained in Fig. 1 and 2. This is

not an individual action storage means for holding individual action definition

information <u>indicating a relationship between the information data and action</u>

<u>information</u> that indicates <u>an action to be executed</u> for the specific information data,

and <u>that indicates execution conditions of the action</u>, as recited in the claims of the

present application. The cited portions of Nakazawa merely disclose the operation

of the network of this reference as detailed in Figs. 5 and 6. This includes issuing a

connection request from a remote access terminal, determining by the web server if

the connection is permissible, determining if the service to desired to be executed is

found, determining if the service is for a local or remote site, and sending a remote

service interface for accessing the service proxy from the remote site to the server,

and loading the object on to the terminal to allow the terminal to execute the service.

In contrast, the limitations in the claims of the present application relate to a

communication proxy apparatus that holds the data necessary for executing an

action, such as the individual action information about the action to be taken for the

information data obtained from the server device, and processing programs for

executing the actions. Nakazawa does not disclose or suggest <u>action definition</u>

<u>information that indicates an action to be executed and that indicates execution</u>

<u>conditions of the actions</u>, as recited in the claims of the present application.

Regarding claims 9 and 10, applicants submit that these claims are dependent on independent claim 1 and, therefore, are patentable at least for the same reasons noted regarding this independent claim. For example, Applicants submit that none of the cited references disclose or suggest where the individual action instruction means includes a means for holding an action instruction, which should be executed for the individual action tag, as a form of processing program, or the individual action execution means including a means for executing the held processing program as an individual action for the individual action tag.

Accordingly, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 1, 9 and 10 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

Claims 2-4, 7 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Logue et al. in view of Nakazawa and further in view of Amicangioli. Applicants respectfully traverse these rejections.

Amicangioli discloses tagging messages to reduce redundant processing of data at two different, but linked, processing units. A first message processing unit assigns a tag to a message based upon its content, where the message and corresponding tag are passed along for further processing at a second network processing unit. The second processing unit decodes the message to identify the tag and, therefore, the process associated with a particular message. In this way, a

17

stream of related messages are identified by the assigned tag, simplifying the process of directing the messages to the appropriate process at a second processing unit.

Applicants submit that these claims are dependent on independent claim 1 and, therefore, are patentable at least for the same reasons noted previously regarding this independent claim. Applicants submit that Amicangioli does not overcome the substantial defects noted previously regarding Logue et al. and Nakazawa. For example, Applicants submit that none of the cited references disclose or suggest where the individual action instruction means includes a means by which, if registration in the individual action storage means is instructed by an explicit instruction containing identification information of target information data and action information to be executed for the information data, or if as a result of checking information data received by the communication proxy apparatus, it is found out that an individual action tag for instructing action information to be executed for the information data is added to the information data, individual action definition information of the information data is registered in the individual action instruction storage according to the action information, or the individual action tag control means including an individual action tag adding/removing means for adding the individual action tag or removing the added individual action tag, under a certain condition, when transmitting from the communication proxy apparatus the information data received by the communication proxy apparatus, and the added data received together with the information data. Amicangioli discloses a redirector

18

140 that appends a tag to a message received from a client. This is not <u>an individual</u> <u>action tag for instructing action information to be executed for the information data</u>, as recited in the claims of the present application. According to the present invention, a tag is added to the information data received from a server device for indicating an action for the tagged information data. This is not disclosed nor suggested by Amicangioli, or any of the other cited references.

Accordingly, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 2-4, 7 and 8 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

Claims 5, 6 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Logue et al. in view of Clinton et al. Applicants respectfully traverse these rejections.

Clinton et al. discloses the design and implications of an extended proxy server that shares cache resources with near neighbors. Information about which local servers have cached a remote request is provided. For each resource, the servers maintain a log that tracks proxy servers that cached the resource on a recent access and are willing to share it. A share log is cross-referenced with knowledge of the Internet topology to determine the closest cache for any given request of a resource. When a server receives a resource request, it responds with a short list of candidate proxies (e.g., 5-10) that are in closer proximity to the requesting client than

the owner. The requestor then makes a separate request to a suitable server to get a copy of the document.

Regarding claims 5 and 11, Applicants submit that none of the cited references disclose or suggest the limitations in the combination of each of these claims of, <u>inter alia</u>, a hierarchical execution means for: receiving a processing request instruction for specific information data, executing the instructed processing request for the instructed information data, transferring the processing request instruction to communication proxy apparatus to lower levels, of which the access log storage means keeps an access log for the instructed information data, after executing the processing request hierarchically, aggregating execution results obtained from the communication proxy apparatuses of lower levels and an execution result of own communication proxy apparatus, and returning the aggregated results. The Examiner asserts that these limitations are disclosed in Logue et al. stating that "it is inherited in the Fig. 4 that set of computer executable instruction is controlling the flow of the request to produce the request response". However, this figure merely discloses the interaction of proxy components including the caching and hit accumulation features of the WebTV proxy according to Logue et al. The function of proxy request processing and the function of hit accumulator processing are separated in Fig. 4. These portions of Logue et al. do not disclose or suggest a hierarchical execution means for <u>executing an instructed</u> <u>processing request for instructed data, transferring the processing request instruction</u> <u>to communication proxy apparatuses of lower levels</u>, of which the access log means

keeps an access log for the instructed information data, after executing the processing request hierarchically, or aggregating execution results obtained from the communication proxy apparatuses of lower levels, as recited in the claims of the present application. According to the present invention, a plurality of the communication proxy apparatuses hierarchically performs processing, that is, while the processing request for aggregating access log flowing from higher level to lower level, the processing results, the access logs, flowing from lower level to higher level of communication proxy apparatus. The highest level is the closest to the server device, and the lowest level is the closest to the client device. None of the cited references disclose or suggest these limitations in the claims of the present application.

The Examiner admits that Logue et al. does not disclose or suggest interaction with other proxy servers and aggregating the results obtained from different proxy server before returning the result to the requesting user, but asserts that Clinton et al. discloses these limitations with the proxy sharing on page 1. However, Clinton et al. merely discloses how to share a cache among a plurality of proxy servers where the proxy servers share a log, reference the log, determining the closest proxy server that holds the desirable cache, and transfers a request to the determined proxy server. Neither Clinton et al. nor any of the other cited references, disclose or suggest a technique of transferring a request for the aggregation process from a higher level to a lower level of communication proxy apparatuses, returning the aggregated access logs from the lower level to the higher

21

level, and resulting in all access logs of the target information data aggregated to the edge communication proxy apparatus on the service side device. Specifically, none of the cited references disclose or suggest a communication proxy apparatus that transfers the processing request instruction to communication proxy apparatuses of lower levels to hierarchically execute the processing request. Further, none of the cited references disclose or suggest to aggregate the execution results, and to return the aggregated results.

Regarding claim 6, Applicants submit that this claim is dependent on independent claim 5 and, therefore, is patentable at least for the same reasons noted previously regarding this independent claim. For example, Applicants submit that none of the cited references disclose or suggest a communication proxy apparatus that includes: an access logging means for logging an access by a device or a user from which an access request is issued, when the communication proxy apparatus handles the access request information data for which an access log is instructed; an access log storage means for holding an access log kept by the access logging means; a means by which when receiving an processing request instruction for specific information data, the instructed processing request for the instructed information data is executed; and a hierarchical execution means, where the hierarchical execution means includes: a means for transferring the processing request instruction to communication proxy apparatuses of lower levels, of which the access log storage means of the communication proxy apparatus stores an access log for the instructed information data; and a means for aggregating executing

results obtained from the communication proxy apparatuses of lower levels and an execution result in own communication proxy apparatus, and for returning the aggregated result, after the processing request is executed hierarchically, wherein the individual action instruction means has a means for instructing execution of the access logging means with timing of access request processing for the information data, as the individual action for the information data that is an access–log target, in response to an access request for the specific information data.

Accordingly, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 5, 6 and 11 of the present application. Applicants respectfully request that these rejections be withdrawn and that these claims be allowed.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-11 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 520.40411X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

Frederick D. Bailey
Registration No. 42,282

FDB/sdb
(703) 684-1120

24